

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
14 October 2004 (14.10.2004)

PCT

(10) International Publication Number
WO 2004/088625 A1

(51) International Patent Classification⁷: G09G 3/32

(21) International Application Number:

PCT/IB2004/000920

(22) International Filing Date: 23 March 2004 (23.03.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0307476.2 1 April 2003 (01.04.2003) GB

(71) Applicant (for all designated States except US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL];
Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): GIRALDO, Andrea [IT/NL]; c/o Philips Intellectual Property & Standards, Cross Oak Lane, Redhill, Surrey RH1 5HA (GB). JOHN-SON, Mark, T. [GB/GB]; c/o Philips Intellectual Property & Standards, Cross Oak Lane, Redhill, Surrey RH1 5HA (GB). FISH, David, A. [GB/GB]; c/o Philips Intellectual Property & Standards, Cross Oak Lane, Redhill, Surrey RH1 5HA (GB).

(74) Agent: WILLIAMSON, Paul, L.; c/o Philips Intellectual Property & Standards, Cross Oak Lane, Redhill, Surrey RH1 5HA (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

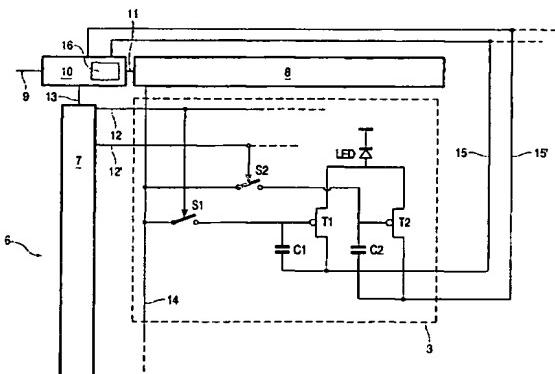
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

(54) Title: DISPLAY DEVICE HAVING A SPARKLING EFFECT AND METHOD FOR DRIVING THE SAME



WO 2004/088625 A1

(57) Abstract: The invention relates to a display device (6;6') comprising a display (2) having a plurality of display pixels (3;3) with light emitting elements (LED) and at least a first drive element (T1) and a second drive element (T2) for driving said light emitting elements (LED) in accordance with an analogue data signal, representing at least one frame in a range from low to high overall light emission states for said display (2). The display device (6;6') further comprises a display controller (10) having a data input (9) for the analogue data signal, a sensing unit (16) adapted to evaluate the overall light emission state of said frame and an output (13) for generating at least one sparkling signal for the one or more display pixels (3;3) having a high light emission state (18) exceeding a sensed low overall light emission state of said frame. The display controller (10) is arranged to individually control said first drive element (T1) and said second drive element (T2) by said sparkling signal such that said one or more display pixels (3;3) having said high light emission state are driven by at least one of said drive elements (T1,T2) in a sparkling light emission state (18';18'') exceeding said high light emission state (18).

BEST AVAILABLE COPY